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4/ Field Beans

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Ontario Department of Agriculture

ONTARIO AGRICULTURAL COLLEGE

Field Beans

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Field beans approach animal foods in nutritive value. They contain a high percentage of protein, and in this respect surpass the cereals commonly used as food such as wheat and oats. There is a higher percentage of protein in beans than in the best cuts of meat, but it is not quite as completely digested. Protein is the nutrient which serves to build and repair body tissues as well as to furnish energy. It performs essentially the same part in nutrition whether it be from beans, wheat, meat, milk, or cheese. Protein is of first importance in a dietary. Beans may be considered as a delicacy for people who lead a sedentary life, and as a standard article of food for those people who follow active operations, and especially if they are largely out of doors. When considered from the standard of pecuniary economy beans might be profitably used to a much greater extent than they are at present.

Beans are legumes and are of high agricultural value. In common with other legumes when grown under proper conditions they possess micro-organisms in the root tubercles which have the power of transferring to the plants the nitrogen of the atmosphere. Nitrogen is essential in the formation of protein in plants, which is so important in a food for man or in a feed for farm stock. It is also essential for the formation of nitrogen compounds in the soil which are of the utmost importance as constituents of fertility.

According to some authorities there are at least eight types or species of beans. These include kidney or haricot, broad, lima, lablab, soy, scarlet runner, and velvet or banana beans, and cow peas. The kidney or haricot beans comprise all those varieties ordinarily used as a human food in Ontario. These are again classified as field and garden beans. Of the field beans some varieties are dwarf and are called bush beans, and others produce long vines and are classed as pole beans. It is the purpose in this bulletin to deal with the bush form of the field beans of the kidney or haricot type. These beans are grown mostly for the production of the ripened seed to be used as a human food, although the injured or inferior samples are frequently used for feeding to farm animals.

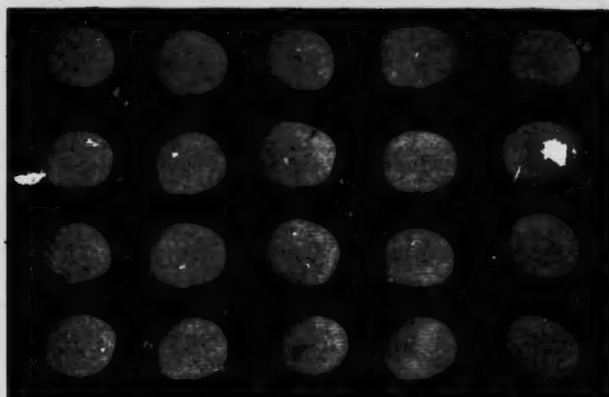
The kidney bean is supposed to be a native of America, where it was grown by the Indians before the advent of the white man. The bean grown by the American Indians is considered to be the original source of the various kinds of field beans now grown in this country. The broad or horse bean which is grown extensively in Europe and in Asia is said to be a native of Persia. It has been grown from remote antiquity in the Eastern countries.

GROWING FIELD BEANS IN ONTARIO.

The production of beans in a commercial way was started in Orleans County, New York State, about 1836, and in Kent County, Ontario, about 1856. Beans are now grown more extensively in Michigan, in California and in New York State than in any of the other States of the American Union. Southern Ontario lies directly between Michigan on the West and New York State on the east, and is particularly well adapted to the production of commercial field beans and of seed beans of fine quality.

According to the Census and Statistics Reports of the Dominion Department of Trade and Commerce for the past five years, 86.6 per cent. of the field beans produced in Canada were grown in the Province of Ontario.

The Reports of the Bureau of Industries of the Ontario Department of Agriculture inform us that for the past thirty-three years there has been an annual average in the Province of Ontario of 44,427 acres, and of 758,762 bushels of beans, with an annual market value of \$946,371. The average yield amounted



Small White Pea Bean.

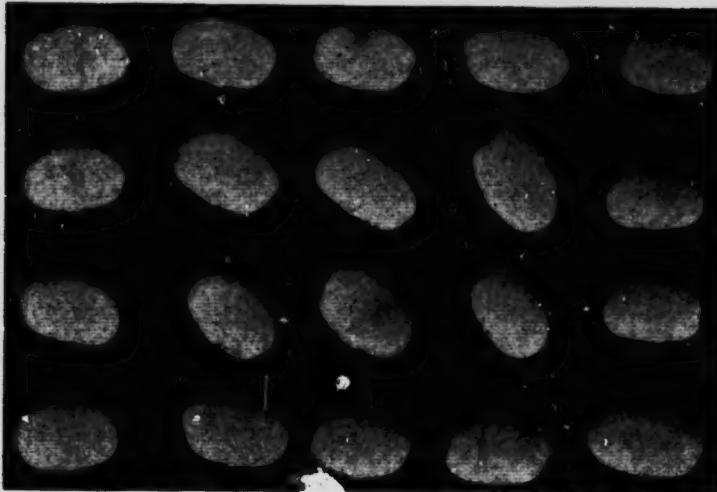
to 17.1 bushels per acre per annum. For the five years, from 1909 to 1913, inclusive, there was an annual average of 56,531 acres, and 964,172 bushels of beans. The average yield for the five year period was 17.2 bushels per acre. It will, therefore, be seen that the acreage of beans in Ontario for the past five years surpassed that of the thirty-three year period by an average of fully 12,000 acres per annum. It will also be noticed that the yield is slightly higher for the last five years than for the longer period.

The average annual value of the bean crop of Ontario amounted to \$545,087 for the ten year period from 1882 to 1891; to \$818,381 for the ten year period from 1892 to 1901; to \$1,263,012 for the ten year period from 1902 to 1911; and to \$2,009,537 for the two year period comprising 1912 and 1913. These figures show a substantial development in the bean industry of Ontario.

Field beans are grown in every County of the Province. In the past ten years Kent County has had an average annual area of 27,422 acres. The other Counties having the greatest areas of beans are in the following order: Elgin, Huron, Norfolk, Lambton, Middlesex, Welland, Northumberland, Prince Edward, Brant, Durham and Simcoe. The largest area used for beans in Kent County was in 1912, in Elgin County in 1913, and in Huron County in 1914. The number

of acres of beans in Huron County in each of the past seven years has been as follows: 1908, 207; 1909, 397; 1910, 784; 1911, 1,477; 1912, 5,426; 1913, 6,823; and 1914, 7,874. During the same period Brant increased from 223 to 923 acres; Essex from 195 to 757 acres; and Welland from 819 to 1,971 acres. During this seven year period there was a decrease in acreage in Kent County from 25,479 to 23,143 acres; in Elgin County from 8,289 to 5,860; and in Norfolk County from 1,733 to 1,267 acres. The bean area in Ontario is extending considerably. In some Counties this crop is now being grown quite extensively where formerly there were comparatively few acres used for the production of beans.

The average yields of beans per acre in the different Counties of Ontario are interesting, as some of the highest yields have been produced in those sections where the cultivation of the crop has been developed in recent years. Those counties which have given the highest average yields per acre per annum for the past ten years are as follows: Prescott, 19.6 bushels; Dundas, 19.4 bushels; Stor-



Med. or Navy Bean.

mont, 18.9 bushels; Russell, 18.8 bushels; Wellington, 18.7 bushels; Norfolk, 18.6 bushels; Huron, 18.5 bushels; Oxford and Haliburton each 18.4 bushels; and Elgin, 18.2 bushels. The lowest average yields per acre per annum for the same ten years were produced in the following Counties: Lanark, 14.8 bushels; Welland, 15.2 bushels; Renfrew, 15.5 bushels; and Haldimand and Grenville each 15.9 bushels. In 1914, Dundas County produced an average of 25 bushels per acre, and an average of 20 or more bushels per acre was produced in each of the Counties of Algoma, Carleton, Glengarry, Haliburton, Prescott, Wellington, and Wentworth.

Those counties of Ontario in which the highest prices were paid for commercial field beans were Welland and Halton in 1913, Welland and Grenville in 1912, and Parry Sound and Victoria in 1911. The average price paid for beans in Ontario for the past thirty-two years has been \$1.25 per bushel, and for the years 1911 1912 and 1913, \$1.84 per bushel. In January, 1915, the Government of Ontario paid approximately \$2.50 per bushel for several carloads of beans for shipment to the Belgians. In March, 1915, the commercial beans of Ontario were selling for about \$3 per bushel.

VARIETIES OF FIELD BEANS.

Field beans have been grown under experiment at the Ontario Agricultural College for upwards of twenty years. The Agricultural College is located in Wellington County, and the average yield of beans per acre in this County is not very different from the average yield of beans for the Province as a whole, and it is slightly higher than that of Kent County. The conditions at the Agricultural College are fairly representative and the results should form a good general guide for the production of beans throughout the Province.

The three principal classes or varieties of the white field beans which have been grown in Ontario for a number of years past are the Small White Pea, the Medium or Navy, and the Marrowfat. These three varieties have been under experiment at the Ontario Agricultural College in each of the past twenty years, the following being the average yield of grain per acre per annum: Small White



Marrowfat Beans.

Pea, 17.8 bushels; Medium or Navy, 19.2 bushels; and Marrowfat, 17.4 bushels. For this experiment the seed of these beans was produced on the College farm throughout the entire period, there being no introduction of fresh seed in any one year from an outside source. The highest yield per acre of the Small White Pea bean was produced in the year 1900, and of the Medium and the Marrowfat varieties in 1910. The results show that the yields have been as satisfactory during the latter part as they were in the earlier stages of the twenty year test. It will, therefore, be seen that field beans may be grown on the same farm for a long period of time without a change of seed from one farm to another if proper care is exercised in the selection of seed and in the cultivation of the crops from year to year.

Ten varieties of field beans have now been under experiment in each of the past ten years, from 1905 to 1914, inclusive. These have been tested under uniform conditions of soil, fertility, cultivation, and date and method of planting,

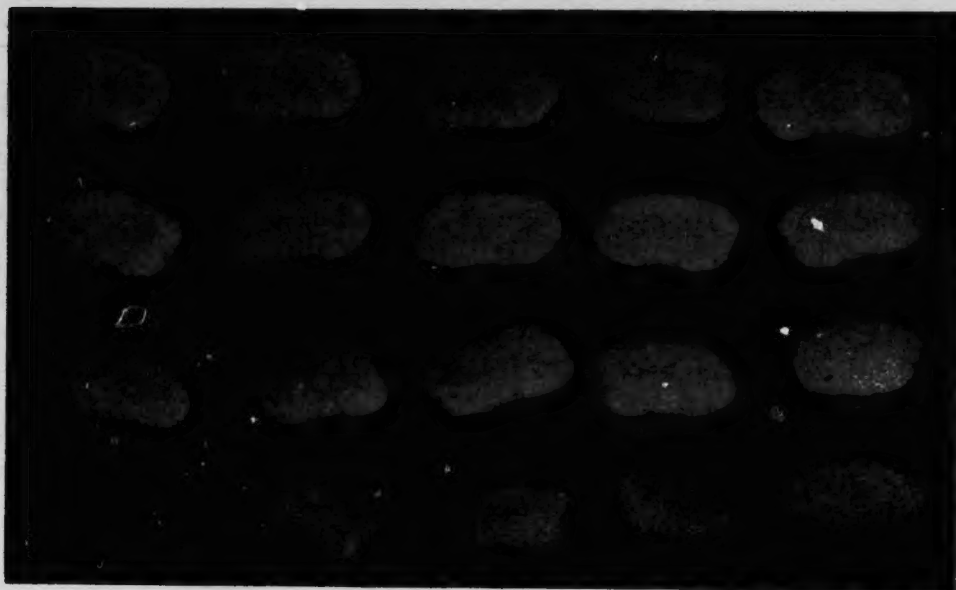
and the work has been conducted with care and accuracy throughout. This experiment was conducted in connection with a four years' rotation. The land received farm yard manure once every four years at the rate of twelve loads (20 tons) per acre and no commercial fertilizer was used at any time. The beans were planted in rows three and one-third links ($26\frac{2}{3}$ inches) apart and the plants were six inches apart in the rows. Planting usually took place within the first ten days of June. The germination of the seed was satisfactory in each of the ten years of the experiment. Careful notes were taken on every variety in each season. The different varieties were harvested in the autumn as soon as each kind had reached the proper stage of maturity. The following table furnishes information regarding the separate varieties and gives the average results of the ten years' experiment in weight of grain per measured bushel and in yield of both straw and grain per acre.

VARIETIES.	Number of Days to Mature (4 yrs.)	Weight of 1,000 Beans (ozs.) (1914)	Per cent. of skin on Beans (1914)	Weight per Measured Bushel (lbs.) (10 yrs.)	AVERAGE YIELD PER ACRE.	
					Straw (tons) (10 yrs.)	Grain (bush.) (10 yrs.)
1. Pearce's Improved Tree..	114	15.4	6.9	63.02	1.19	23.41
2. Scholfield Pea	113	12.4	6.4	64.16	1.11	18.75
3. Marrowfat	111	17.2	5.2	64.25	1.05	18.69
4. Large White Haricot	115	17.8	7.7	61.55	1.02	18.58
5. Common White Pea.....	109	10.5	6.5	63.91	.81	17.42
6. New Prize Winner	110	12.5	6.9	63.31	.96	17.24
7. Medium or Navy	114	12.5	6.4	64.22	1.10	17.12
8. Red Kidney.....	107	18.1	7.3	56.66	1.10	16.95
9. White Wonder	113	12.3	6.4	63.83	.92	16.36
10. Yellow Eyed Marrowfat	112	16.3	6.1	62.32	.93	14.34

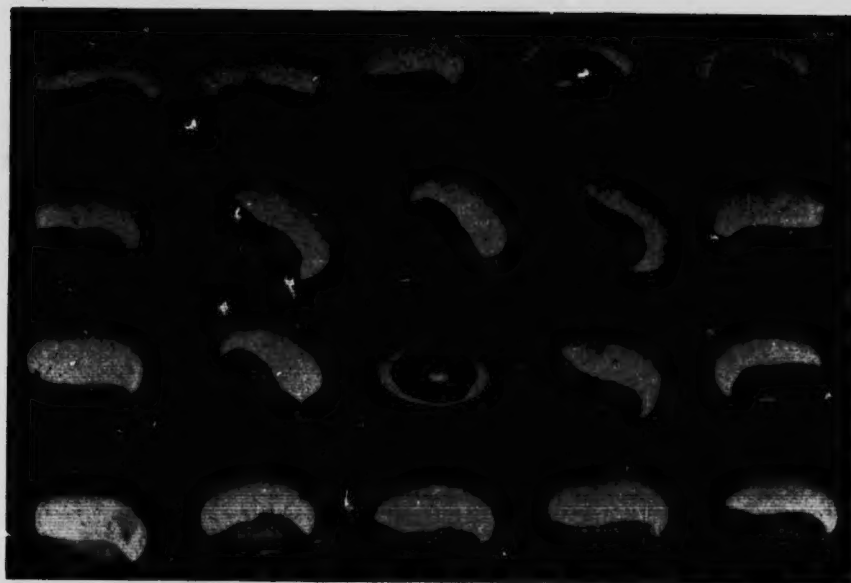
The beans reported in the accompanying table were all white with the exception of the Red Kidney and the Yellow Eyed Marrowfat.



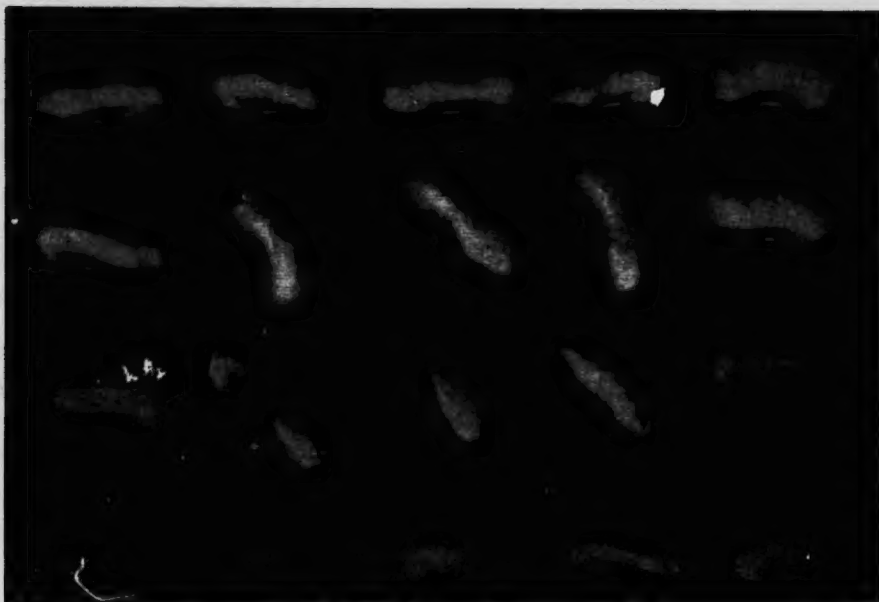
Pearce's Improved Tree Beans.



Haricot Beans.



Yellow-eyed Marrowfat Beans.



Red Kidney Beans.



White Kidney Beans.

The Pearce's Improved Tree beans gave the highest average yield of grain per acre for the five best, and also for the five poorest years of the experiment, the average for the five best years being 34.7 bushels per acre per annum. In 1914 seventeen varieties of beans were under test at the College, and the highest yield per acre was produced by the Pearce's Improved Tree variety.

In 1911 the bean crop at the College was almost a failure owing to the exceptionally dry weather in the month of June, and the excessive heat in the month of July. Had the results for this season been discarded the average yield per acre for the nine years would have been 25.7 bushels for the Pearce's Improved Tree, 20.4 bushels for the Marrowfat, and 18.9 bushels for the Common Pea beans, and the other varieties would have been increased in somewhat similar proportions.

The Large White Haricot, Medium or Navy, and Pearce's Improved Tree were from five to six days later in ripening than the Common Pea beans. The Red Kidney variety was earlier in reaching maturity than any of the other kinds included in the experiment. In regular farm practice the tendency would probably be to cut and harvest the beans when they were slightly immature.

In each of the past three years measurements were made regarding the length of plants of the different varieties of beans. Those having the shortest vines were Red Kidney, Small White Pea, Marrowfat, and Yellow Eyed Marrowfat, and those having the longest vines were Large White Haricot, Pearce's Improved Tree, and White Wonder.

From determinations made throughout the experiment it was found that the greatest number of pods per plant was produced by Scholfield Pea, 29; White Wonder, 26; Small White Pea, 25; Medium or Navy, 25; and the smallest number by Yellow Eyed Marrowfat, 13; and Marrowfat and Red Kidney each 14.

The longest pods on the average were produced by the Red Kidney and the Large White Haricot, and the shortest by the Small White Pea, Scholfield Pea, and White Wonder. The average number of beans per pod for the ten year experiment were as follows: Small White Pea, 4.7; White Wonder, 4.6; Medium, 4.5; Scholfield and New Prize Winner each 4.4; Pearce's Improved Tree, Large White Haricot, and Yellow Eyed Marrowfat each 4.2; Red Kidney, 3.7; and Marrowfat, 3.6.

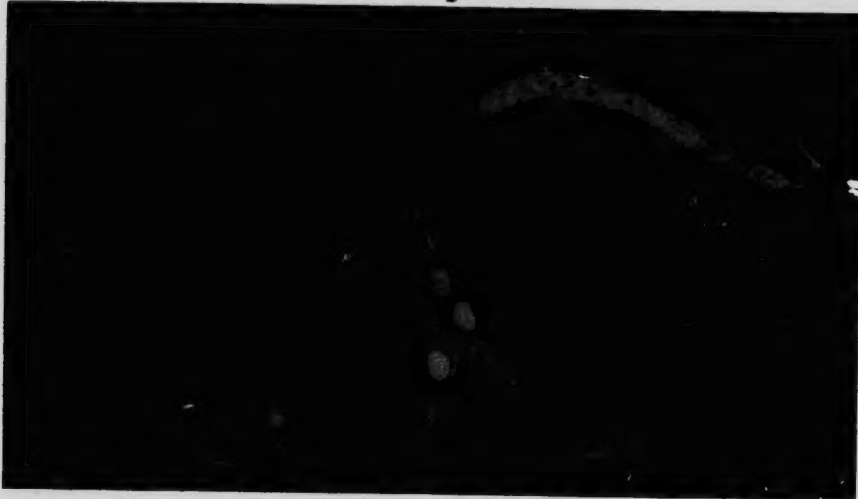
Seed of the Small White Pea bean was secured from Ridgetown, Kent County, in the spring of 1912, and from Blenheim, Kent County, in the Spring of 1913. The first lot has been grown in the trial plots at the College for three years and the latter lot for two years. The Small White Pea bean grown at the College for over twenty years gave an annual yield per acre of 1.4 bushels over the Ridgetown seed in the average tests for three years, and of four bushels per acre over the Blenheim seed in the average tests for two years. Another lot of seed of the Small White Pea bean has been bought recently from the Kent Farmers' Produce Company for entering into the test in the summer of 1915.

Co-operative experiments with beans have been conducted by Ontario farmers through the medium of the Experimental Union in each of the past eighteen years. In the average of seven years' tests the Marrowfat surpassed the New Prize Winner by practically one bushel per acre as reported by exactly one hundred farmers. In four years' tests over Ontario the Medium or Navy gave a little larger yield than the Marrowfat variety. The Pearce's Improved Tree beans were not distributed until the spring of 1913. In the average results of twenty-seven co-operative experiments for the past two years the Pearce's Improved

Tree gave an average of 22.7 bushels, the Marrowfat, 22.3 bushels, and the Common Pea bean 19.2 bushels per acre. The Pearce's Improved Tree bean was the most popular variety with the experimenters in each of the past two years. This variety will likely be increased rapidly by the experimenters and there should be a good supply of seed by the end of the present year.

COOKING QUALITIES OF BEANS.

There is probably no way in which the table quality of beans can be more accurately determined than by cooking and comparing different kinds under uniform conditions. Practical tests of the cooking qualities of the ten varieties of beans here reported were made on two occasions. The first cooking test was carried on in connection with the thesis prepared by Mr. A. A. McMillan, and the work was conducted by Miss Watson, Principal of the Macdonald Institute,



Pods of Small White Pea Beans.

with the assistance of the Senior Home-maker class. For the cooking test one-half pint of beans of each variety of the crop of 1910 was used. The beans were soaked in water for twelve hours after which the soakage water was removed and fresh water added. The exact time required to cook each variety was then determined. When each variety was cooked the water was drained off and five grams of salt and twelve grams of butter were added to each lot before the beans were tested. Each variety was then carefully judged for mushiness, mealiness, appearance, yellowness, size, toughness of skin, and flavor.

The second test was conducted in March, 1915, with beans grown at the College in the previous year. The method followed was the one already outlined and the work was conducted in the Department of Field Husbandry, six separate judges making the determinations. The results of the tests of 1911 and of 1915 agree very well in practically all essential features.

In appearance of the cooked beans there were differences of opinion, some preferring the larger beans such as the Large White Haricot and the Pearce's Improved Tree, and others preferring the smaller sized beans such as the Small White Pea and the White Wonder varieties. The Marrowfat beans were placed

rather low in the list in appearance owing to the fact that the skins were so tender that the beans presented a mussy appearance.

The Red Kidney and the Large White Haricot, owing no doubt to the high percentage of comparatively tough skin, kept their form much better than most other varieties. In the tests made the low percentage of thin, tender skin of the Marrowfat variety was very perceptible. The Red Kidney, the Large White Haricot, and the White Wonder were comparatively dry and mealy in comparison with the Marrowfat and the Yellow Eyed Marrowfat varieties. The Marrowfat was one of the whitest beans under test, and the White Wonder and the New Prize Winner showed a somewhat yellowish cast. In flavor, the White Wonder, the Pearce's Improved Tree, and the Scholfield Pea were the three best, and the Marrowfat and the Large White Haricot were the two poorest varieties of white beans in the tests made in each of the two years. The flavor of the Red Kidney was excellent, but the toughness of the skin and the color of the beans were



Pods of Pearce's Improved Tree Bean.

against this variety when used in this way. It will be seen that in some respects there is quite a marked difference in the quality of field beans of different varieties. It is interesting to note that some of the varieties which stand high in productiveness are also varieties of good quality. This is particularly true of the Pearce's Improved Tree bean.

PEA BEANS FROM DIFFERENT SOURCES.

The Common small pea bean is the variety most extensively grown in Ontario. It is claimed that the market for this variety is more staple than for any of the other varieties. The pea beans do comparatively well on a variety of soils and may be able to withstand adverse conditions better than some of the other kinds. In the Experiments at the College the Small White Pea bean did not give the highest yield per acre of the ten varieties in any one of the ten years. In each of the years 1909 and 1911, however, it came second in comparative yield of beans. These were two of the poorest years of the experiment, the average yield

per acre in each season being comparatively low. In 1907, however, the average yield was also low, and the Small White Field bean came at the bottom of the list, so that no definite rule can be established in regard to the varieties in respect to hardiness. The bean crop is highly susceptible to climatic changes.

In the early part of the present year commercial samples of pea beans were obtained from the Counties of Kent, Huron, Middlesex, Brant and Welland, and these were compared in quality with each other and with the samples of pea beans which have been grown at the College for two, for three, and for more than twenty years. The percentage of skin of the pea beans obtained from the different sources was found to be as follows: Kent County, 6.6; Huron County, 6.6; Middlesex County, 5.9; Brant County, 6.5; and Welland County, 6.6. The pea beans grown at the College for three years from seed obtained from Ridgetown, Kent County had 6.2; for two years from Blenheim, Kent County, 6.3; and from the strain which has been grown at the College for over twenty years in succession, 6.4 per cent. of skin.



Beans affected with Pod Spot or Anthracnose.

The beans were cooked under uniform conditions as previously described and were carefully tested by seven judges. There was so slight a difference in the quality of the beans obtained from the different sources that no distinctive placings could be made regarding the quality of the beans. The principal conclusion from the experiment was that the beans were all of good quality regardless of the source from which they were obtained. There was practically no difference in the quality of the beans obtained from the different counties and those obtained in the experiments at the College which had been continued for two, three or more than twenty years.

IMPROVEMENT OVER EXISTING VARIETIES.

Work is in progress at the Ontario Agricultural College with the object of obtaining varieties of beans which are superior to the best varieties now in cultivation. New strains have been started from choice plants of the White Wonder, New Prize Winner, and Pearce's Improved Tree varieties. The most promising results have been obtained from a strain of the Pearce's Improved Tree beans started by the writer from work in his home garden. The object was to secure

a strain shorter in the vine, earlier in maturity, and higher in yield of beans than the original variety. This strain surpassed the other strains in earliness and in yield per acre in the duplicate tests made in 1914. The average yield was at the rate of 34.2 bushels per acre which was higher than all other yields of the season. If this strain of beans continues to do well it will likely be distributed for co-operative experiments throughout Ontario in 1916 or in the year following.

POD SPOT OR ANTHRACNOSE.

Special efforts are now being made by the Department of Field Husbandry at the College to ascertain whether or not it is possible to secure a strain of the Small White Pea bean which will be immune, or partially immune, to the plant disease known as the Pod Spot or Anthracnose. This disease is considered to be the greatest enemy to the bean plant in Ontario. If diseased seeds are used they are likely to produce diseased plants which spread the spores to other plants and cause them to be infested with the same fungus. As the spores are distributed



Germination, Six Days after Planting.
86 per cent. 44 per cent.

only when they are wet caution should be taken not to disturb the plants when covered with rain or dew. Spots on the pods often cause spots on the beans within. Such seed should not be planted. It is practically impossible to pick pure seed from threshed beans grown in an infested field. Bean growers would find it of great advantage to gather by hand from the fields some plants which are free from disease to furnish foundation seed for future years. As scientists have found no effective remedy for this disease which can be used to advantage in the field we believe that systematic work in plant selection to be of great importance. At the request of the writer, Mr. Wm. Southworth, of the Department of Field Husbandry, went to Kent County last autumn and visited some of the principal bean growers and selected from the fields some choice, upright, early, prolific plants of the Small White Pea variety and which were free, apparently from any infection of the Anthracnose. The seed from these individual plants will be grown separately and the crops will be carefully examined. The selection work may be considerably increased next autumn, as the Ontario Department of

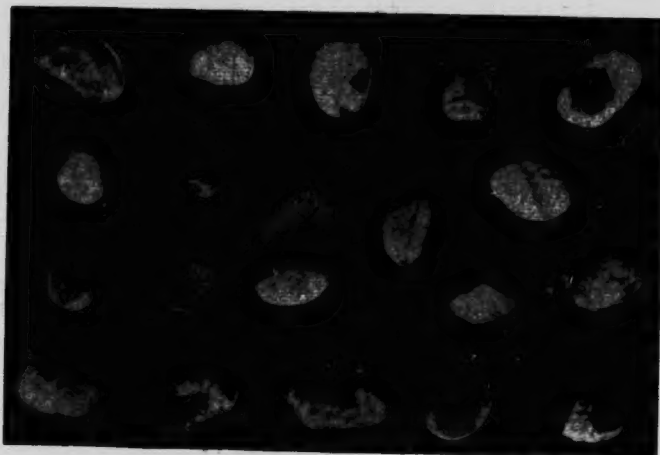
Agriculture is anxious to develop a greater and a better bean industry in this Province.

CULTURAL METHODS.

Field beans are grown successfully on a great variety of soils. They do particularly well on rich loams, sandy loams, gravelly loams, or gravelly clays. All soils for bean production should be well underdrained either naturally or artificially. With proper drainage even clay soils have produced beans satisfactorily as regards both yield and quality.

The bean crop is an excellent one to fit into a rotation as it assists admirably in the preparation for the crop which is to follow. Beans usually do particularly well after clover or grass sod and are frequently followed by winter wheat in some localities and by spring grains in other sections.

In a three or a four years' rotation one dressing of farm yard manure at the rate of about twelve loads per acre is considered fairly good treatment.



Bean Pickings.

Commercial fertilizers have not been used very extensively in Ontario. In the State of New York some growers sow broadcast about two hundred and fifty pounds of basic slag per acre. Some others use about the same amount of a fertilizer containing two per cent. of ammonia, ten per cent. of phosphoric acid, and eight per cent. of potash. It would be wise for the growers to experiment with fertilizers in a small way before using them extensively on the bean crop.

It is usually sound practice to plow the land in the autumn in preparation for the beans, especially if the land is heavy. If the soil is a good loam and it is properly handled, good results may be obtained from spring plowing. If the land is fall plowed it should be cultivated occasionally during April and May so as to conserve moisture, destroy weeds and weed seeds, and make the soil fairly firm underneath and fine and mellow on the surface.

It is not only important to sow the variety which will give the best results but it is also of great importance to use well developed, well matured, uniform, sound seed of strong vitality. The seed should be graded, hand picked, and carefully tested for germination before it is sown. There are different ways in which the germination test can be made. A good method is to place sand or

soil in a box ten inches square and three inches deep in which 100 seeds can be placed in ten rows with ten seeds in each row. This not only enables a person to ascertain the percentage of germination but also to observe the uniformity of the growth. Sometimes there is a complete germination of seeds and yet a marked unevenness of growth, owing to the weak vitality of some of the seeds. There should be a strong, uniform growth of plants if the best results are to be obtained in the field. The reader's attention is directed to the illustration given in this bulletin of germination tests.

The right time for planting beans depends upon various circumstances, such as quality of soil, locality, place in the rotation and variety of beans to be used. Under ordinary conditions the seeding might take place within the last week of May or the first week in June. It is important to plant at just the right time so as to give the beans a quick start and a rapid continuous growth.

Field beans are very frequently planted in rows about twenty-eight inches apart by use of the ordinary grain drill. Special bean planters are used in some places. The depth of planting should be regulated by the kind of land, the temperature of the soil and the amount of moisture which it contains. If the Small White Pea bean is used, three pecks of seed per acre is considered ample. The Marrowfat variety under similar conditions would require about five pecks per acre. At the College we aim to have the plants six inches apart in the rows, but in general cultivation the seeds should usually be planted closer than six inches.

It is a good practice to run a harrow or a weeder over the land before the beans are up. The cultivator should be used soon after the bean plants have shown in the rows. In dry weather it is a good plan to cultivate every week or ten days. If there are occasional rains the beans should not be cultivated when they are wet. Care should be taken, however, to cultivate the land before a crust forms on the soil after a rain. It is considered unwise to cultivate after the blossoming period has started.

If beans are grown on vacant lots in or near a city where labor is plentiful, they might to advantage be pulled by hand in the old fashioned way. Where the beans are grown as a farm crop, however, they can be harvested with a bean harvester which is a two wheeled implement possessing two flat knives which are placed in the shape of a V. This machine has the advantage of cutting two rows at a time and placing the two rows into one windrow. Some growers bunch the beans together by hand and allow them to dry. Some use a side delivery rake and thus bring three, four, or even five rows together. It is important to keep the beans clean and if possible to store them in the barns without getting much rain.

The threshing is usually done with a machine specially constructed for the purpose, and having two cylinders, which run at different velocities. Where a special machine is not available the grain separator is sometimes arranged for threshing beans. There are more beans broken or split, however, and the split beans cannot be sold either for commercial or for seed purposes. If a grower has a special variety which he is growing for seed he sometimes threshes them with horses or with a flail, providing the quantity is not very large.

The bean crop is sometimes graded and prepared for market by the growers, but generally it is sold to the merchant who does the grading in warehouses and has the picking done by female help. In Kent County the marketing is greatly facilitated by the Kent Farmers' Produce Company, a co-operative organization

which was started about twelve years ago. This company has been a success financially as well as an organization which has been of great service to the bean growers.

CONCLUSION.

Bean growing in Ontario has had a steady and a substantial development. By the introduction of improved machinery the crop is now produced much more



Plant of Pearce's Improved Tree Bean.

easily than it was in former years. It fits into a rotation of farm crops admirably. The seed furnishes a concentrated and a highly nutritious article of human food. The crop is readily stored, easily transported and can be used in a variety of ways. The price of beans has advanced from time to time until it is now more than double the average price of beans for the past thirty years. It is probably safe to say that there was never a time more opportune than the present for increasing the bean crop in Ontario to the advantage of both the producers and the consumers.

